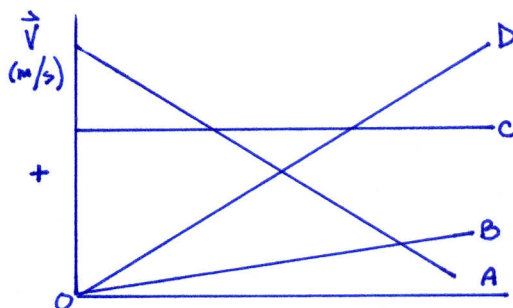


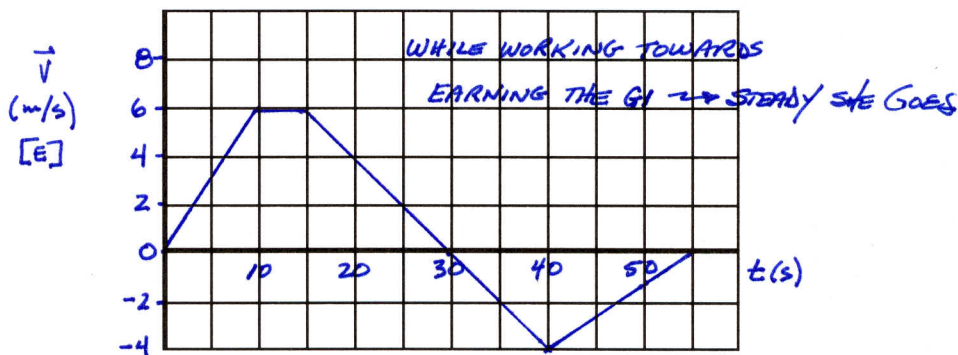
## MORE PRACTICE

Consider the graphical representation of several objects moving in a straight line. Which of the objects is (are):

- moving in a negative direction and losing speed
- moving in a positive direction and gaining speed albeit at a slow rate
- travelling at a constant speed in a positive direction
- at rest for an extended period of time
- moving in a positive direction but losing speed
- moving in a positive direction but gaining speed at a very rapid rate



Consider the velocity-time graph displaying the behaviour of the European designed Steinmobile.



- During which time interval(s) did the car travel in an easterly direction?
- During which time interval(s) did the car travel in a westerly direction?
- During which time interval(s) did the car travel in a northeasterly direction?
- How far did the car travel during the first 10 seconds?
- What was the car's average acceleration during the first 10 seconds?
- Describe the car's motion during the time interval  $t=10$  s to  $t=15$  s.
- What was the average acceleration during the above time interval?
- What was the car's displacement during the time interval  $t=30$  s to  $t=40$  s?
- What was the car's average acceleration during the above time interval?
- What was the car's displacement over the time interval  $t=0$  s to  $t=55$  s?
- What was the distance travelled during the time interval  $t=0$  s to  $t=55$  s?
- What was the car's average speed for the entire 55 s interval?
- What was the car's average velocity for the entire 55 s interval?
- What was the car's average acceleration for the entire 55 s interval?
- Derive a position-time graph which depicts the above motion. Assume that the car started 10 m [W] of the reference point.